

tion where the molecular weight distribution is 2.21. No new matter has been added. Since this amendment places the present application in better form for consideration on appeal, entry thereof is deemed proper under 37 CFR 1.116(a). Favorable consideration is respectfully solicited.

Claims 2-5, 7 and 8 have been rejected under 35 USC 102(b) as being anticipated by or, in the alternative, under 35 USC 103 as being obvious in view of either Okamoto or Yuki. Claim 5 has been rejected under 35 USC 103 as being unpatentable over Yuki in view of Okamoto. Claims 9-11 have been rejected under 35 USC 103 as being unpatentable over either Okamoto '394 or Yuki and further in view of Okamoto '872. Claim 11 has been rejected under 35 USC 103 as being unpatentable over either Okamoto '394 or Yuki in view of Okamoto '872. Applicants respectfully request reconsideration in light of the amendments to the claims and the following comments.

As discussed in the previous response, the instant invention is directed to a separating agent used in the separation of chiral materials by liquid chromatography. The separating agents of the present invention have a narrow molecular weight distribution and therefore avoid some problems associated with conventional polysaccharide derivatives having a wide molecular weight distribution. That is, the elution of polysaccharide derivatives of a low molecular weight from a column during use, steadiness of the baseline during operation of the column and a very limited number of solvents which can be used as the eluent. The presently claimed invention overcomes these problems and is not disclosed by the prior art cited by the Examiner.

Okamoto et al '394 discloses the use of cellulose derivatives having an aromatic ring as a separating agent for optical isomers, geometrical isomers and polymers having different molecular weight ranges by liquid chromatography. The only discussion this reference has with respect to molecular weight distribution is in Comparative Example 1 in column 12 where cellulose triacetate having a molecular weight distribution of 2.45 is shown. The presently claimed invention is distinguishable over

this reference in that the upper limit of the molecular weight distribution is 2.21. Moreover, as will be shown below, this difference is not merely an obvious distinction and the patentability of the presently claimed invention over this reference will be clearly established.

The Yuki et al reference discloses a separating agent for optical isomers comprising a cellulose triacetate consisting essentially of the type II form. However, like the previously discussed reference, the only disclosure this reference has with respect to molecular weight distribution is in synthesis Example 1 in column 7 wherein cellulose triacetate having a molecular weight distribution of 2.45 is shown. Since the upper limit of the molecular weight distribution of the present claims is 2.21, the presently claimed invention clearly is patentably distinguishable over this reference.

Okamoto et al '872 is directed to an alkyl-phenylcarbamate derivative of a polysaccharide which is used in the optical separation of a racemic mixture. However, there is no disclosure at all in this reference with respect to molecular weight distribution. As such, this reference only shows an alkyl-phenylcarbamate derivative of a polysaccharide and has no discussion at all with respect to the criticality of the claimed molecular weight distribution range.

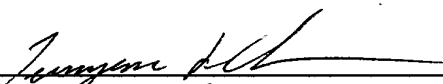
In order to clearly illustrate the superiority of the presently claimed invention, Applicants are enclosing a table which compares the separating agents of the prior art cited by the Examiner with the separating agents of the present invention having a molecular weight distribution of from 1.22 to 2.21. In the enclosed table, the separating agent of Comparative Example 1 falls within the scope of Okamoto et al '872. The separating agent designated as Okamoto et al is the cellulose triacetate separating agent of Okamoto et al '394. The separating agent designated as Yuki et al is the separating agent corresponding to Yuki et al '968.

As illustrated in the enclosed table, the separating agents of Examples 1-4, which correspond to the present invention,

clearly have a higher separation factor, resolution and baseline stabilization time as compared with the comparative separating agents. Although the amylose derivative of Comparative Example 1 had a higher separation factor and resolution, it also had a much higher baseline stabilization time of 26 hours. As shown by the data contained in the enclosed table, the presently claimed invention clearly is unobvious in light of the prior art cited by the Examiner. The Examiner is respectfully requested to reconsider the present application and to pass it to issue.

Respectfully submitted,

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Encl: Table
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	Material for synthesis of separating agent		Separating agent (polysaccharide derivative)		Separation factor (α)	Resolution (Rs)	Base line stabilization time (hr)
	item	Mw/Mn	item	Mw/Mn			
Ex. 1	amylose (synthetic)	<1.1	amylose tris(3.5-dimethylphenyl carbamate)	1.22	2.93	11.2	3.5
Ex. 2	amylose (synthetic)	<1.1	amylose tris(3.5-dimethylphenyl carbamate)	1.25	2.79	10.8	3.5
Ex. 3	amylose (synthetic)	<1.1	amylose tris(3.5-dimethylphenyl carbamate)	1.47	2.98	10.9	2.5
Ex. 4	amylose (synthetic)	<1.1	amylose tris(3.5-dimethylphenyl carbamate)	2.21	2.80	9.6	2.0
Com. Ex. 1	amylose (natural)		amylose tris(3.5-dimethylphenyl carbamate)	5.29	3.05	11.6	26.0
Okamoto et al.	cellulose		cellulose triacetate	2.45	1.34	0.91	
Yuki et al.	cellulose		cellulose triacetate	2.45	1.35	0.91	